

WHAT IS CLAIMED IS:

Sub A1 1. A C-11 protein comprising a protein selected from the group consisting of:

(a) a protein comprising an amino acid sequence having SEQ ID NO. 2 (SEQUENCE LISTING); and

(b) a protein comprising an amino acid sequence that is derived from the amino acid sequence having SEQ ID NO. 2 by deletion, substitution or insertion of one or more amino acids, said protein having cell-calcification inhibitory activity.

2. A gene encoding the protein according to claim 1.

3. A pharmaceutical composition comprising the protein according to claim 1.

4. The pharmaceutical composition according to claim 3, wherein said composition is intended for a cell-calcification inhibitor.

Sub A2 5. A cell-calcification inhibitor comprising a c-erg protein selected from the group consisting of:

(a) a protein comprising an amino acid sequence having SEQ ID NO. 4 (SEQUENCE LISTING); and

(b) a protein comprising an amino acid sequence that is derived from the amino acid sequence having SEQ ID NO. 4 by deletion, substitution or insertion of one or more amino acids, said protein having cell-calcification inhibitory activity.

6. An antibody to the C-11 protein according to claim 1.

7. The antibody according to claim 6, wherein said antibody is a monoclonal antibody.

5 8. A method for measuring the calcification of cells comprising:

measuring the expression of a C-11 gene or a c-erg gene in the cells.

10 9. The method according to claim 8, wherein the expression of the gene is measured by the amount of C-11 mRNA expressed in the cells or the amount of c-erg mRNA expressed in the cells using a probe against a DNA sequence specific to the C-11 gene or to the c-erg gene.

15 10. The method according to claim 8, wherein the expression of the gene is measured by the amount of expression of a C-11 protein in the cells or the amount of expression of a c-erg protein in the cells.

20 11. The method according to claim 8, wherein the expression of the gene is measured by the amount of the C-11 protein expressed in the cells or the amount of the c-erg protein expressed in the cells by means of the antibody according to claims 6, or 7.

25 12. A method for diagnosing osteoarthritis or OPLL comprising:

measuring the cell-calcification using a method

according to any of claims 8-11.

13. A kit for measuring the cell-calcification of cells comprising either or both of an antibody to a C-11 protein and an antibody to a c-erg protein.

14. A method for screening a substance having cell-calcification inhibitory blocking activity, said method comprising using cells transformed with a gene encoding a protein selected from the group consisting of:

(a) a protein comprising an amino acid sequence having SEQ ID NO. 2 (SEQUENCE LISTING);

(b) a protein comprising an amino acid sequence that is derived from the amino acid sequence having SEQ ID NO. 2 by deletion, substitution or insertion of one or more amino acids, said protein having cell-calcification inhibitory activity;

(c) a protein comprising an amino acid sequence having SEQ ID NO. 4 (SEQUENCE LISTING); and

(d) a protein comprising an amino acid sequence that is derived from the amino acid sequence having SEQ ID NO. 4 by deletion, substitution or insertion of one or more amino acids, said protein having cell-calcification inhibitory activity.

15. A pharmaceutical composition comprising an erg protein.

16. A pharmaceutical composition comprising an

19. A pharmaceutical composition comprising a protein having a consensus amino acid sequence between a c-erg protein and a C-11 protein.

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